

## LED achieves a range of more than 100 meters



Security surveillance over large distances is now possible thanks to the new infrared Dragon Dome LED from Osram Opto Semiconductors. The focused beam of this high-power Infrared LED (IRED) achieves a range of more than 100 meters. It has a compact design and does not need an external lens. With its wavelength of 850 nanometers (nm), this LED is ideal as a light source for security surveillance tasks such as Closed Circuit Television (CCTV).

The Dragon Dome SFH 4783 is the first high-power infrared LED that emits its light within a narrow angle of  $\pm 12^\circ$ . From a current of 1 A, it achieves a total radiated power of 430 milliwatts (mW) and, therefore, a radiant intensity of 2.3 watts per steradian (W/sr). At this radiant intensity, the beam of light will have a usable range of more than 100 meters, depending on the sensitivity and field of view of the camera. Radiant intensity is measured in W/sr and indicates the light output within a solid angle segment. The high total radiated power of this IRED is made possible by the state-of-the-art thin-film technology, which enables the light to be extracted extremely efficiently from the chip.

This high radiant intensity benefits all applications that need strong focused light to provide reliable illumination over large distances such as outdoor CCTV surveillance systems at border crossings and at airports. With a wavelength of 850 nm, the emitted light is well suited to camera sensors but is barely perceptible to the human eye, enabling very discreet surveillance.

### **Integrated lens reduces time and cost**

The narrow light beam is produced by the deep metallic reflector and the lens of the Dragon Dome. The Surface Mount Technology (SMT) package, which is compatible with other Osram Dragon designs, is suitable for reflow soldering processes, making

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handling easier and further reduces production costs.

### Technical data for Dragon Dome SFH 4783:

Component size	11 x 6 x 5.7 mm <sup>3</sup>
Wavelength	850 nm
Total radiated power	430 mW at 1 A

<http://www.osram-os.com/pr-SFH4783> [1]

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